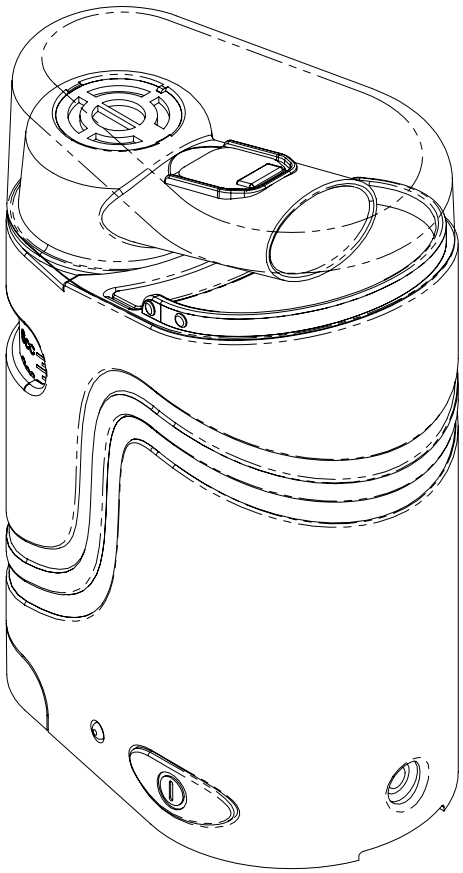
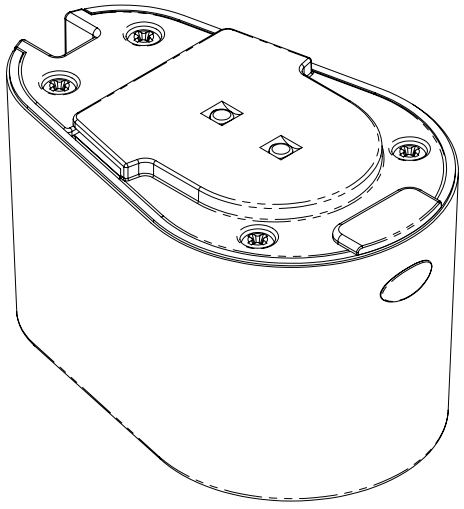
PIONEER

N283 PORTABLE NEBULIZER

USER'S MANUAL





Merits Health Products Co., Ltd.

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IEC SYMBOLS

Caution, Attention or Consult Accompanying Documents.

Alternating Current

Direct Current

Type BF Equipment

Double Insulation

Important Safeguards

CAUTIONS

- Federal Law restricts this device to sale by or on the order of a physician.
- Follow the instructions of your physician to operate this unit regarding the type of drug to be used, the dosage, the frequency, and duration of the inhalations.

1. Read and understand the information contained before use and save for future reference.
2. Ensure the dryness of the inlet filter for proper operation.
3. This device is only to be used for the purpose for which it was expressly designed, that is, as a device for aerosol therapy. Any use other than that must be considered as inappropriate and therefore dangerous. The manufacturer won't be held responsible for damage resulting from improper, wrong or unreasonable use, or if the device is used on electrical installation that does not correspond to the current standards.
4. Do not place or store the unit where it can fall or be pulled into a tub or sink.
5. Do not place or drop into water or other liquid.
6. Do not place this equipment near hot, sparking or burning objects. Keep the cord away from **HEATED** or **HOT** surfaces.
7. NEVER block the air openings of the product or place it on a soft surface, such as a bed or couch, where the air opening may be blocked.

8. Unplug the unit before filling. Do not overfill.
9. To prevent over-heating and damage to the device, it must be turned off for 40 minutes after every 20 minutes of operating.

DANGER

1. Electrical Shock Hazard - do not disassemble the cabinet from product.
2. Always unplug the unit while not using it.
3. Do not use while bathing or in wet or damp location.
4. Do not reach for a product that has fallen into water. Unplug immediately.

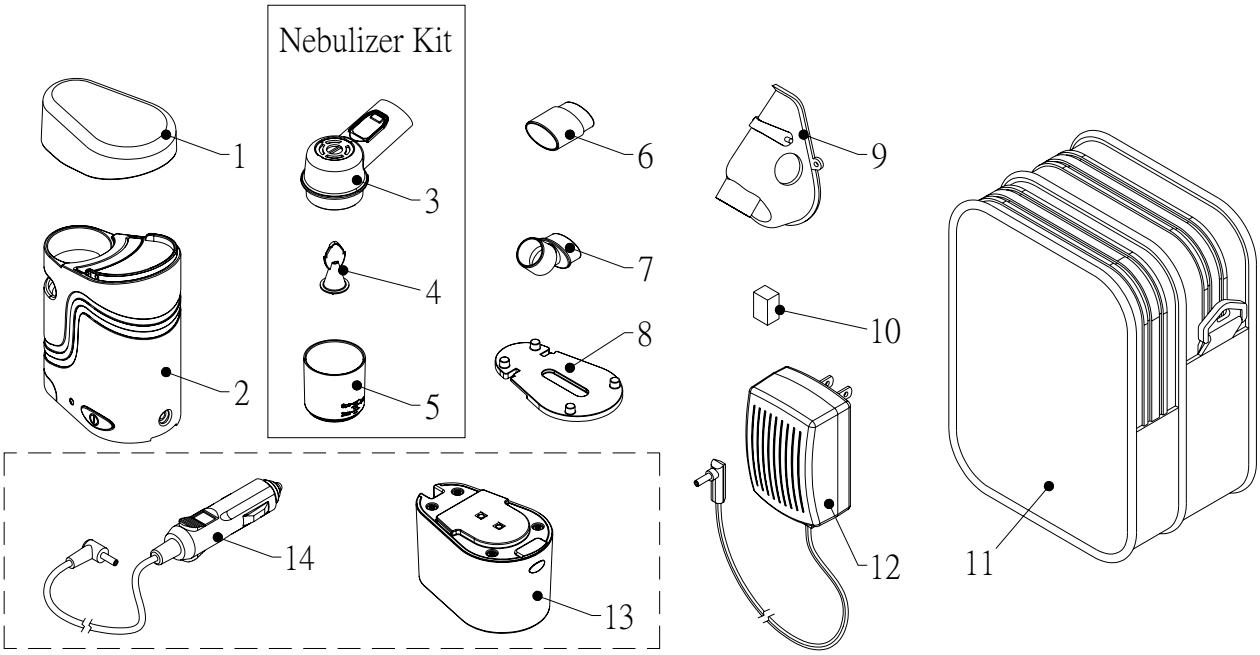
WARNING

1. Never operate this product while asleep or drowsy. Close supervision is necessary when the device is used by, on, or near children or handicapped people.
2. Disconnect the power cord from the electrical outlet before cleaning or servicing.
3. Do not use product in the presence of mixtures of anesthetics.
4. Do not use oil or grease on or near this device.
5. Turn the unit off when it is not in use.
6. To prevent the risk of cross infection, different persons should never use the same nebulizer kit.
7. A disposable nebulizer kit is used in this model, cleaning of the nebulizer is recommended after each aerosol treatment. Disinfecting is recommended once a day. We recommend that you follow the cleaning and disinfecting procedures described on page 9.

Description

This portable nebulizer, N283, is designed to efficiently deliver the prescribed liquid medication to treat your respiratory disorders, such as asthma, allergies, and bronchitis. ~~The Pioneer nebulizer will convert the liquid medication into an aerosol mist that penetrates through your lungs.~~

The nebulizer kit of the device is provided with a two-valve system, which ensures maximum efficiency of the inhalation, thus minimize the waste of the drug. In practice, during expiration, the expiration-valve on the nebulizer cap will open, allowing the patient's exhaled air to pass to atmosphere, avoiding contamination of the device. Conversely, during inspiration, the valve will close, maximizing the amount of inhalation.



1. Top Cover
2. Main Device(Compressor)
3. Nebulizer Cap
4. Micronization Cone
5. Drug Ampoule
6. Mouth Piece
7. Mask Adapter
8. Rubber Cushion
9. Pediatric Mask
10. Inlet Air Filter
11. Carrying Bag
12. AC/DC Adapter

Optional Parts:

13. Rechargeable Battery Pack
14. DC Car Adapter

Specifications

Electrical Requirements	100~240VAC, 50/60Hz ; 12VDC
Power Consumption	< 15 watt
Dimensions	3.4”(D)×2.2”(W)×4.9”(H) 3.4”(D)×2.2”(W)×6.9”(H)(incl. battery)
Weight	370 g (0.81 lbs) 615 g (1.35 lbs)(incl. battery)
Sound Pressure Level	53dB(A)
Max. Comp. Pressure	30 Psig or greater
Neb. Operating Pressure	10~14 Psig
Operating Flow	2 LPM
Particle Size Less Than (MMAD)	5 μm
Ampoule Capacity	6 ml
Intermittent Use	20 min ON/40 min OFF
Operating Temperature	10℃ ~ 40℃ (50℉ to 104℉)
Operating Humidity	Up to 95% non-condensing
Storage/Transport Temperature Range	-20℃~ 60℃ (-4℉ to 140℉)
Storage/Transport Humidity	Up to 95% non-condensing

(1). Conditions may vary based on altitude above sea level, barometric pressure and temperature.

(2). This product complies with the following standards: C22.2 No 601.1-M90, UL Std. No 2601-1 and IEC/EN 60601-1.

(3). For electromagnetic compatibility the standards are based as follow: CSA 601.1-2 and IEC/EN 60601-1-2.

(4). Protection against electric shock is classified as **Type II**.

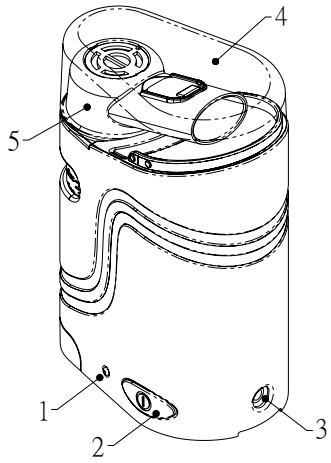
(5). Degree of protection against electric shock is classified as **Type BF**.

(6). Mode of operation belongs to intermittent mode.

(7). Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide

(8). Degree of protection against ingress of water is rated as IPX0 (Device is not water proof).

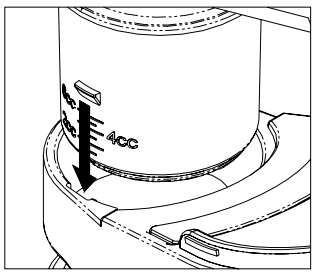
Operating Instructions

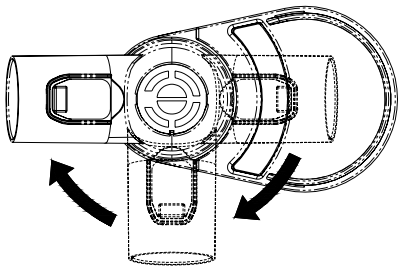


1. Power Indication Light
   Green light while power ON
2. ON/OFF Button
3. Power Socket
4. Top Cover
5. Nebulizer Kit

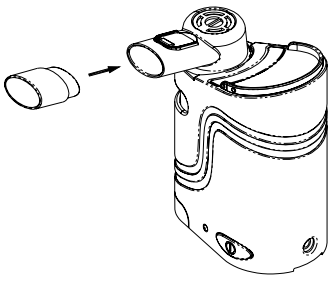
1. Before using the device make sure that all parts are clean, as described in the chapter “Cleaning and disinfecting”.
2. Remove the top cover and nebulizer kit from the device.
3. Pour the drug prescribed by the doctor into the drug ampoule and reassemble kit. Do not fill over the upper line in the ampoule. The maximum content is approx 6ml. If the dose to be inhaled is larger than the maximum capacity of the ampoule, it should be divided into several separate treatments.

   Note: This device is not intended to be used with Pentamidine.
4. Align the tenon of the nebulizer kit with the groove on the main unit as illustrated. Push down and turn the nebulizer kit to lock it on the main unit. Adjust the angle of the nebulizer kit to the desired position of treatment.





5. The device can be used in 2 different ways:

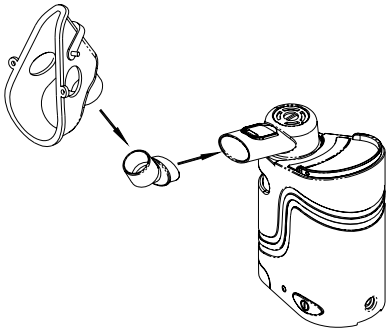


To use with mouthpiece

Install the mouthpiece on the nebulizer cap with the desired angle for aerosol therapy.

To use with mask

Install the mask with mask adapter on the nebulizer cap. Ensure their tightness and closure by applying sufficient pressure when installing.

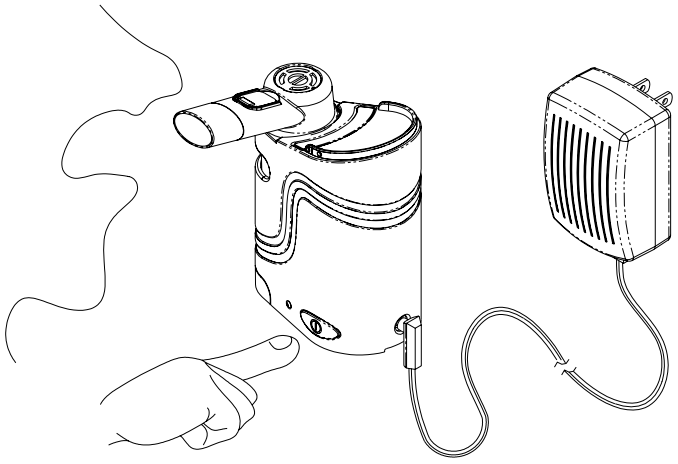


6. Connect the device to electrical power. This device can be operated with various power sources:

With the AC/DC adapter

This is designed for use at home or, wherever 100V~240V, 50/60Hz power supply is available.

1.) Insert the adapter into an appropriate wall outlet, the specifications are indicated on the adapter.
2.) Insert the plug of the AC/DC adapter into the power socket of the device.
3.) Press the ON/OFF button to start the aerosol therapy. The power indication light (green) will be illuminated.
4.) Turn off the device by pressing the ON/OFF button again after the treatment is finished. The power indication light (green) will be turned off.



With the DC car adapter (option)

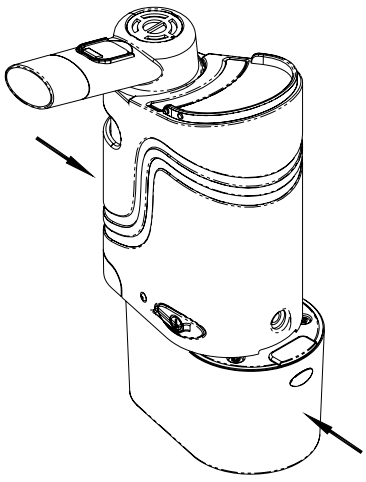
It is convenient to allow patient to take the treatments when traveling by car.

1.) Make sure the cigarette lighter-socket in the car or DC source is 12VDC. Insert the plug of the DC car adapter into the cigarette socket.
2.) Insert the other end of the adapter into the power socket of the device.
3.) Press the ON/OFF button to start the aerosol therapy. The power indication light (green) will be illuminated.
4.) Turn off the device by pressing the ON/OFF button again after the treatment is finished. The power indication light (green) will be turned off.

Warning: DO NOT use while driving!!

With the rechargeable battery (option)

An optional rechargeable battery is also available for providing two treatments of about 20 minutes each. This device is designed for intermittent use. Turn off the unit after 20 minutes of usage and allow unit to cool down for 40 minutes before turning it on again.



1.) Inert the battery by matching the tenon on the top of battery and rabbet at the device bottom. Slide the battery pack for installation. A “click” sound will be heard when the installation is done.
2.) Press the ON/OFF button to start the aerosol therapy.

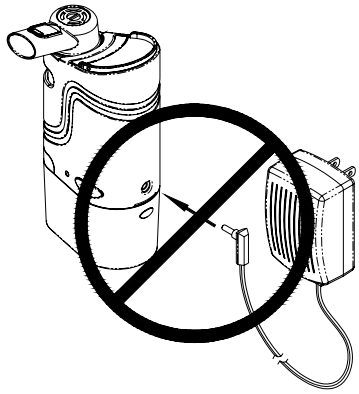
The power indication light (green) will be illuminated.

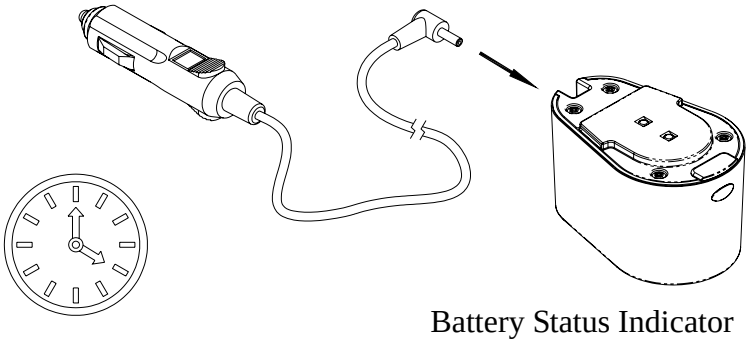
3.) Turn off the device by pressing the ON/OFF button again after the treatment is finished. The power indication light (green) will be turn off.
4.) Remove the battery pack by sliding it in counter direction.

Charging the battery (option)

The battery can be charged with either the AC/DC adapter or the DC car adapter.

1.) Remove the battery from the device. (Battery will not be charged when it is attached to the compressor system.)
2.) Recharge the battery by inserting plug of the AC/DC adapter (or DC car adapter). The minimum charging time is about 3~5 hours.
3.) The battery status indicator will illuminate amber during the charging operation and turn green when fully charged.





Battery Status Indicator

- Green : Fully charged
- Amber : Normal charging
- Amber (Blinking): Protective charging
- Amber & Green (Blinking): Bad Battery (Need to be replaced.)

Note:

a. For a new rechargeable battery, the first charge shall be no less than 8 hours.
b. Disconnect the battery from the main unit when not using for a long period of time.
c. The battery should always be stored FULLY CHARGED in a cool dry place.
d. Charge the battery continually to maintain maximum battery capacity.

Warning: To prevent the hazard of short circuit. DO NOT use any metal or conductor to connect the electrodes on the battery.

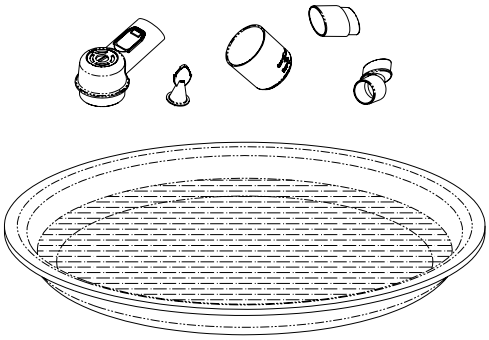
Cleaning And Disinfecting

Cleaning the nebulizer kit

Following the cleaning instructions after each use will prevent any remaining medication in the nebulizer kit from drying and causing the device to nebulize ineffectively.

-Cleaning after every use:

1. Press the ON/OFF button to power off device. Unplug the AC/DC adapter from the power socket of device.
2. Remove the mouthpiece (or mask adapter) and nebulizer kit from the device.
3. Separate the parts of the nebulizer kit and rinse all of them under running water.



Note: Never clean with benzene, thinner or flammable chemical products.

4. Especially wash the parts in contact with the drug (nebulizer cap, mouthpiece, micronization cone and drug ampoule) with running water.
5. You may also rinse thoroughly the parts (excluding the main unit) under lukewarm running water (max.60 degrees for 10 min.). Leave them to air dry.

Warning:

- DO NOT boil or autoclave the complete device or any parts.
- This portable nebulizer is not provided sterile nor is it intended to be sterilized.

-Disinfect Daily:

1. Using a clean container or bowl, soak items (excluding main device) in three parts hot water to one part white vinegar for 30 minutes.
2. With clean hands remove items from disinfectant solution, rinse under hot tap water, and air dry on a clean paper towel.

Cleaning the main device

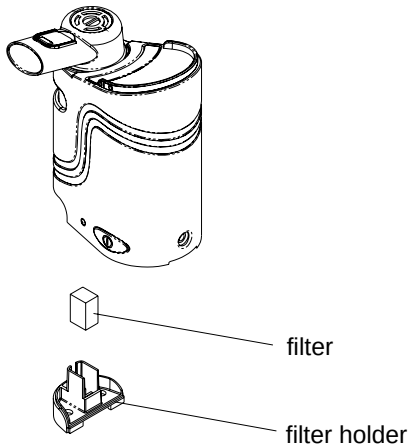
1. Turn the unit off. Unplug power cord from the main device.
2. Wipe the outside surface of the main device with a clean damp cloth every few days to keep it dust-free. DO NOT clean using abrasive cleaners.

Danger: DO NOT submerge the main unit or the AC/DC adapter or DC car adapter in water. Doing so will result in device damage.

Maintenance

Warning: The nebulizer kit is only designed for using, and should be used, with this specified compressor. Use with a different kind of compressor may impair the performance.

1. The disposable nebulizer kit must be replaced after every 30 days of use. You can purchase more nebulizer kits from your device supplier.
2. On the bottom of the main device there is a filter holder and an inlet air filter, which ensures that the mist generated by the device contains no extraneous substances. The frequency of changing the filter depends on the using conditions of the device (e.g. in more or less dusty atmosphere). The filter should be replaced every 6 months or sooner when a gray coloration is observed. Additional filters can be purchased from your device supplier.



To change the filter:

1.) Remove the filter holder located on the bottom of the main device. Pull out the old filter from the holder and discard it.

2.) Push a new filter into position, and reinstall the filter holder back to the main device.

3. Authorized personnel maintain the rest of this device only.

Warranty

Merits Health Products Co., Ltd. warrants the **Pioneer** nebulizer compressor to be free from defective workmanship and materials for a period of 3 years from the date of purchase. The optional rechargeable battery is warranted for 180 days from date of purchase. Check with your dealer for more details. This warranty is limited to the original purchaser of the nebulizer. Any defective part or assembly will be repaired or replaced, at the sole discretion and determination of Merits Health Products Co., Ltd., if the unit has been properly operated during the warranty period. Normal maintenance items and disposable components are not covered by this warranty. Shipping charges, if any, shall be paid by the purchaser. Note: There is no other express warranty. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to the duration of the express limited warranty and to the extent permitted by law and all implied warranties are excluded. This warranty does not cover providing a loaner compressor, compensating for costs incurred for compressor rental, or labor costs incurred in repairing or replacing defective part(s).

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CE Marked For Model N283 (Europe) 230V~, 50Hz	CE 0197